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10/610,689

06/30/2003

Douglas R. Carrell

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08/22/2006

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EXAMINER

PRICE, NATHAN E

ART UNIT

PAPER NUMBER

2194

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/610,689 | | CARRELL ET AL. | |
| | Examiner | | Art Unit | |
| | Nathan Price | | 2194 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003 and 19 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/19/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 37 are pending.

Claim Objections

2. Claims 30 and 31 are objected to because of the following informalities: Claim 30 recites the limitation "the first system" in line 3. There is insufficient antecedent basis for this limitation in the claim. Claim 31 inherits this deficiency. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 12, 13, 21, 22, 31 and 37 contain trademarks/trade names. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe

operating systems, computer manufacturers and programming models and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 23 – 37 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As to claims 23 – 31, the language of the claims raises the question as to whether or not they can be implemented in software alone. Specifically, claims 23 – 31 are systems that apparently can be implemented in software and do not appear to recite hardware necessary to realize the functionality of the software. Claims 32 – 37 are directed towards a computer-readable medium. However, based on paragraph 30 of the specification, it is not clear if the computer-readable media can comprise only communication media. In this case, the computer-executable instructions are not tangibly embodied in a computer-readable medium so as to be executable.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2194

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 – 6, 8, 11, 12, 14 – 21, 23 – 25, 27 – 30 and 32 – 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Marcos et al. (US 6,347,342 B1; hereinafter Marcos).

As to claim 1, Marcos discloses a method of enabling a first system to use a second system [col. 4 lines 60 – 62] comprising:

receiving, from the first system, a first request directed to the second system, said first request being in a form adapted for the first system but not for the second system [col. 4 lines 14 – 19, 60 – 62];

performing a first conversion of said first request to produce a second request, said second request being in a form adapted for said second system but not for said first system [col. 4 lines 15 – 34];

invoking the processing of said second request by the second system [col. 4 lines 35 – 45];

receiving a first reply from the second system [col. 4 lines 35 – 45];

performing a second conversion of said first reply to produce a second reply [col. 4 lines 35 – 45]; and

providing said second reply to said first system [col. 4 lines 35 – 45].

As to claim 2, Marcos discloses that said first request comprises a datum in a first format, and wherein said act of performing said first conversion comprises: converting said datum to a second format different from said first format, said second

Art Unit: 2194

request comprising said datum in said second format [col. 4 lines 14 – 19; col. 17 lines 9 – 22].

As to claim 3, Marcos discloses that said first request comprises a datum having a first type [col. 4 lines 26 – 34] and wherein said act of performing said first conversion comprises:

converting said datum to a second type different from said first type, said second request comprising said datum in said second type [col. 4 lines 26 – 34].

As to claim 4, Marcos discloses that said first type is supported in said first system but not in said second system [col. 15 line 62 – col. 16 line 4].

As to claim 5, Marcos discloses that said second type differs structurally from said first type in at least one aspect [col. 15 line 62 – col. 16 line 55].

As to claim 6, Marcos discloses that said first request comprises a call using a first mechanism to a software object in the second system, and wherein said act of performing said first conversion comprises: converting said call for use with a second mechanism different from said first mechanism [col. 4 lines 14 – 45].

As to claim 8, Marcos discloses that said first request comprises a remote call according to a first protocol, wherein said second request comprises a remote call according to a second protocol different from said first protocol, and wherein said act of performing said first conversion comprises: preparing said second request to correspond substantively with said first request and to work in accordance with said second protocol [col. 4 lines 20 – 25].

As to claim 11, Marcos discloses that said first request comprises a call to a software object in said second system, and wherein the form of said first request is adapted for making requests from the first system to a remote system that is of the same type of environment as the first system [col. 3 lines 39 – 67; col. 4 lines 14 – 63].

As to claim 12, Marcos discloses that said second system comprises an environment based on a MICROSOFT WINDOWS operating system [col. 8 lines 4 – 6].

As to claim 14, Marcos discloses a method of enabling a first software object in a first system to call a second software object in a second system [col. 4 lines 14 – 20], the method comprising:

evaluating first information that the first software object exposes when making a call to a remote system [col. 6 lines 50 – 65];

evaluating second information that the second software object exposes when receiving a call from a remote system [col. 7 lines 6 – 43];

generating conversion information descriptive of a process to be followed in order to convert the first information into a form compatible with the second information [col. 6 lines 50 – 65; col. 7 lines 6 – 43];

providing the conversion information to a conversion service that uses the conversion information to convert a first call from the first object into a call in a form usable by the second object [col. 6 lines 50 – 65; col. 7 lines 6 – 43].

As to claim 15, Marcos discloses that the first information comprises a call parameter in a first format, wherein the second information comprises a call parameter in a second format, and wherein the act of generating conversion information

Art Unit: 2194

comprises: generating code or data that describes how to convert a call parameter from the first format to the second format [col. 7 lines 6 – 23; col. 17 lines 9 – 21].

As to claim 16, Marcos discloses that the first information comprises a call parameter of a first data type which is not usable by the second software object [col. 15 line 62 – col. 16 line 4], and wherein the act of generating conversion information comprises:

generating a second data type that corresponds to the first data type and which is usable by the second software object [col. 7 lines 6 – 43];

generating code or data that describes how to convert data of the first data type to the second data type [col. 7 lines 6 – 43].

As to claim 17, Marcos discloses that the first information comprises a return value in a first form, wherein the second information comprises a return value in a second form different from said first form, and wherein the act of generating conversion information comprises: generating code or data that describes how to convert data in said first form to said second form [col. 4 lines 14 – 20; col. 7 lines 6 – 43, 55 – 67].

As to claim 18, Marcos discloses that said first software object makes a call to a remote system according to a first programming model, wherein said second data object receives a call from a remote system according to a second programming model, and wherein the act of generating conversion information comprises: generating code or data that indicates which programming model the first software object uses to make a remote call [col. 7 lines 24 – 43].

As to claim 19, Marcos discloses that the act of generating conversion information comprises: generating code or data that describes at least one customization in converting from the first programming model to the second programming model [col. 7 lines 6 – 43].

As to claim 20, Marcos discloses that the act of generating conversion information comprises: generating a transaction initiation message that is used in invoking the second software object or in reply to the first software object [col. 7 lines 6 – 23; col. 10 line 43 – col. 11 line 14].

As to claim 21, Marcos discloses that said second system comprises an environment based on a MICROSOFT WINDOWS operating system [col. 8 lines 4 – 6].

As to claims 23 and 24, see the rejection of claim 1. Although claim 1 recites elements as systems instead of objects, the rejection cites the proper parts of Marcos.

As to claims 25 and 27 – 30, Marcos discloses that the service object comprises:
a listener object that detects that a contact regarding the first request has been made by the first software object [col. 3 lines 60 – 67];

a transit object that receives information related to the first request from the first software object and prepares the information into a form that can be used for a call to the second software object [col. 4 lines 14 – 34];

an invocation object that lays out the information prepared by the transit object into a form that can be used for a call to the second software object, and that uses the laid out information to invoke the second software object [col. 4 lines 14 – 34];

a flow control object that manages the interaction of one or more components involved in the conversion of the first request into the second request [col. 7 lines 6 – 43];

an error handling object that receives an indication of an error from the second software object and packages the error into a form usable by the first system or the first software object [col. 13 lines 2 – 40].

As to claim 32, see the rejections of claims 1 and 23.

As to claim 33, Marcos discloses that the instructions are adapted to perform acts further comprising:

listening for a connection from the first system [col. 3 lines 60 – 67]; and receiving information related to the first call in response to the connection [col. 4 lines 14 – 34].

As to claim 34, Marcos discloses that the first call comprises data in a first form, and that the instructions are adapted to perform acts further comprising: converting the data from the first form into a second form usable by the second software object [col. 4 lines 14 – 34].

As to claim 35, Marcos discloses that the second software object provides a first reply in response to being called, and wherein the instructions are adapted to perform acts further comprising: converting the first reply into a second reply, the second reply being in a form that is compatible with the first software object or the first system, the first reply being in a form that is not compatible with the first software object or the first system [col. 4 lines 14 – 45].

As to claim 36, Marcos discloses that the second software object generates error information in response to being called, and wherein the instructions are adapted to perform acts further comprising: converting said error information into a format compatible with the first software object or the first system, or into a format compatible with a communication protocol employed by the first system [col. 12 line 66 – col. 13 line 11; col. 4 lines 35 – 45].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marcos.

Marcos discloses that said first system is adapted to communicate a remote call according to a first network protocol, and wherein said first and second requests, and said first and second replies, are transmitted using a second network protocol different from said first network protocol, and wherein said acts of performing first and second conversions comprise: including in said second request and said second reply header information that corresponds to information that is contained in requests or replies according to said first protocol [Fig. 3C; col. 8 lines 18 – 44]. Although Marcos fails to specifically disclose that the requests and replies are in a protocol incompatible with the

first system, multiple protocols are disclosed. Also, as seen in Figure 3C, the mediating components can be located on both the client and server machines, allowing for protocol conversion before transmission and a second conversion at the server. Furthermore, the disclosed network protocols include the claimed header information.

7. Claims 7, 13, 22 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcos as applied to claims 1, 14 and 32 above, and further in view of Lymer et al. (US 6,230,117 B1; hereinafter Lymer).

As to claim 7, Marcos fails to specifically disclose a commarea. However, Lymer discloses that said first mechanism comprises a commarea that is used to pass a call parameter to said object and to receive a result from said object, and wherein said second mechanism comprises: a first area that is used to pass said call parameter, or a converted call parameter that corresponds to said call parameter, to said object; and a second area that is used to receive said result, or a converted result that corresponds to said result, from said object [Fig. 1; col. 3 line 61 – col. 4 line 4]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these references because both focus on interfacing between different computing environments.

As to claims 13 and 22, Marcos fails to specifically disclose an IBM mainframe. However, Lymer at least implies that said first system comprises an IBM mainframe [col. 1 lines 20 – 39]. See the rejection of claim 7 for motivation to combine.

As to claim 37, Marcos fails to specifically disclose CICS or IMS. However, when combined with Lymer for the reasons given in the rejection of claim 7, the combined references disclose that the first call is compatible with either a CICS or IMS programming model [Lymer: col. 2 lines 6 – 11], and wherein the second call is compatible with either a COM or .NET programming model [Marcos: col. 6 lines 35 – 39].

8. Claims 9 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcos as applied to claims 1 and 23 above, and further in view of Tanenbaum (Tanenbaum, Andrew S., "Computer networks," Third Edition, Prentice Hall PTR, 1996.).

As to claim 9, Marcos fails to specifically disclose that one protocol is bidirectional and one is unidirectional. However, when combined with Tanenbaum, the two references disclose that said first protocol calls for invocation to be performed with a bidirectional interaction between a caller and a callee, wherein said second protocol calls for an invocation to be performed in a unidirectional call message from said caller to said callee [Tanenbaum: page 23, connection-oriented and connectionless service], and wherein said act of preparing said second request comprises:

engaging in an interaction with the caller on the first system to obtain information relating to a call [Marcos: col. 10 lines 43 – 55];

collecting said information [Marcos: col. 10 lines 56 – 67]; and

preparing said second request using the collected information [Marcos: col. 10 lines 56 – 67].

It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these references because, although Marcos discloses details of enabling incompatible environments to communicate, the reference does not go into details of how networks operate, which is provided by Tanenbaum.

As to claim 26, Marcos fails to specifically disclose queuing. However, Tanenbaum discloses a queuing object that queues at least one of connections and requests from the first system [page 202, sliding windows]. See the rejection of claim 9 for motivation to combine.

9. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marcos as applied to claim 30 above, and further in view of Taylor (Taylor, Ed, "SNA & TCP/IP Integration Handbook." Taylor Networking Series, McGraw-Hill, 1999; retrieved from <<http://www.netlibrary.com/Reader/>> on 16 August 2006.).

As to claim 31, Marcos fails to specifically disclose an FMH7 field of an SNA protocol. However, Taylor discloses error information comprising an FMH7 field of an SNA protocol [page 68: FMH7]. When combined, the references disclose that said error-handling object [Marcos: col. 12 line 66 – col. 13 line 11] creates header information representative of the contents of said FMH7 field [Taylor: page 68: FMH7], said header information being adapted for use with a TCP protocol [Taylor: page 386 ¶ 2, integration of TCP/IP and SNA]. It would have been obvious to one of ordinary skill in

the art at the time Applicant's invention was made to combine these references because Marcos discloses providing communication between different systems without restricting the type of system or protocol, but does provide TCP/IP as a specific example [col. 4 lines 15 – 25; col. 8 lines 39 – 44] and Taylor discloses integration of specific protocols [page 386 ¶ 2].

Conclusion

10. The prior art made of record on the P.T.O. 892 that has not been relied upon is considered pertinent to applicant's disclosure. Careful consideration of the cited art is required prior to responding to this Office Action, see 37 C.F.R. 1.111(c).

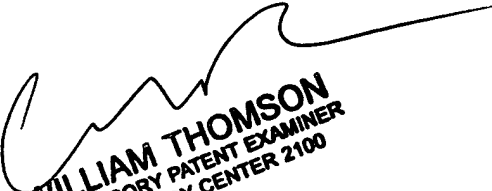
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Price whose telephone number is (571) 272-4196. The examiner can normally be reached on 7:30am - 4:00pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2194

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NP


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